

**BEST AVAILABLE COPY**PATENT APPLICATION  
ATTORNEY DOCKET NO. 06558.011002**Claims**

What is claimed is:

- [c1] A method for developing a sub-sea hydrocarbons field, comprising:  
liquefying natural gas aboard a vessel using a liquid coolant aboard the vessel to  
obtain liquefied natural gas;  
transporting the liquefied natural gas to an onshore terminal;  
re-gasifying the liquefied natural gas; and  
obtaining a new batch of liquid coolant using energy recovered from the re-  
gasifying the liquefied natural gas.
- [c2] The method of claim 1, wherein the liquid coolant comprises liquid nitrogen and  
further comprising:  
transporting the new batch of liquid nitrogen offshore aboard the vessel using a  
plurality of storage tanks.
- [c3] The method of claim 1, further comprising:  
de-gasifying hydrocarbons obtained from the sub-sea hydrocarbons field to  
produce oil and gas; and  
conveying the produced gas to the vessel and the produced oil to the storage tank  
on the seabed.
- [c4] The method of claim 3, wherein the produced gas is conveyed to the vessel via a  
riser.
- [c5] The method of claim 3, further comprising:  
pre-treating the produced gas before liquefying.
- [c6] The method of claim 3, further comprising:

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storing the oil in a storage tank attached to a seabed.

- [c7] The method of claim 1, further comprising:  
liquefying a new batch of natural gas using the new batch of liquid nitrogen  
aboard the vessel.
- [c8] The method of claim 1, wherein one of a plurality of storage tanks aboard the  
vessel storage tanks is empty to receive an initial portion of the liquefied natural  
gas.
- [c9] The method of claim 1, wherein the re-gasifying the liquid natural gas is  
performed at the onshore terminal.
- [c10] The method of claim 1, wherein re-gasifying the liquefied natural gas produces  
high pressure gas.
- [c11] The method of claim 10, further comprising:  
sending the high pressure gas to a pipeline.
- [c12] The method of claim 1, wherein transporting the liquefied natural gas to the  
onshore terminal is performed using the vessel.
- [c13] A system for developing an oil and gas field, comprising:  
a vessel configured to liquefy natural gas to obtain liquefied natural gas using  
liquid nitrogen aboard the vessel; and  
an onshore terminal configured to obtain a new batch of liquid nitrogen using  
refrigeration recovered from re-gasifying the liquefied natural gas.
- [c14] The system of claim 13, further comprising:  
a sub-sea separation system configured to de-gasify hydrocarbons to produce oil  
and gas; and

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a natural gas conveyance system configured to use a riser to convey the gas produced from the sub-sea separation system to the vessel; and convey the oil produced from the sub-sea separation system to a sub0-sea storage tank.

- [c15] The system of claim 14, further comprising:  
a natural gas pre-treating facility configured to treat the produced gas.
- [c16] The system of claim 14, further comprising:  
a power and control buoy configured to provide electric power and control functions for the sub-sea separation system.
- [c17] An apparatus for developing a sub-sea hydrocarbons field, comprising:  
means for liquefying natural gas aboard a vessel using liquid nitrogen aboard the vessel to obtain liquefied natural gas;  
means for transporting the liquefied natural gas to an onshore terminal;  
means for re-gasifying the liquefied natural gas; and  
means for obtaining a new batch of liquid nitrogen using energy recovered from the re-gasifying the liquefied natural gas.